

AMENDMENTS TO THE CLAIMS

1-5. (Cancelled)

6. (Currently Amended) A system for locating a marker associated with a patient comprising:

an excitation source for emitting an exciting waveform during an excitation interval, said exciting waveform causing said marker to resonate;

a sensing coil that senses a magnetic flux from said resonating marker during a observation interval and outputs a receiver input; and

a receiver for analyzing said receiver input in a coherent manner wherein said excitation interval and/or observation interval can be automatically adjusted in said receiver to match the characteristics of said marker.

7. (Original) The system of Claim 6 wherein said excitation source and said sensing coil repeats the emission of said exciting waveform and outputting of said receiver input for a plurality of iterations, said receiver operative to average a plurality of receiver inputs over a plurality of said observation intervals from said plurality of iterations prior to coherent analysis.

8. (Original) The system of Claim 6 wherein said exciting waveform is a triangular waveform.

9. (Currently Amended) A system for locating a marker associated with a patient comprising:

an excitation source for emitting an exciting waveform during an excitation interval, said exciting waveform causing said marker to resonate;

a sensing array that includes a plurality of sensing coils that each sense a magnetic flux from said resonating marker during a observation interval and outputs a plurality of receiver inputs; and

a receiver for analyzing said plurality of receiver inputs in a coherent manner wherein a length of said excitation interval and/or observation interval is programmable in the receiver.

10. (Original) The system of Claim 9 wherein said excitation source and said sensing coil repeat the emission of said exciting waveform and outputting of said plurality of receiver inputs for a plurality of iterations, said receiver operative to average multiple sets of said plurality of receiver inputs over a plurality of said observation intervals from said plurality of iterations prior to coherent analysis.

11. (Original) The system of Claim 9 wherein said exciting waveform is a triangular waveform.

12. (Currently Amended) A system for locating a marker associated with a patient comprising:

an excitation source for repetitively emitting an exciting waveform during an excitation interval, said exciting waveform causing said marker to resonate;

a sensing array including a plurality of sensing coils, said sensing coils outputting a plurality of inputs during a observation interval; and

a receiver for analyzing said plurality of inputs in a coherent manner wherein said excitation interval and/or said observation interval is adjustably programmable to match characteristics of said marker.

13. (Original) The system of Claim 12 wherein said receiver averages multiple sets of said plurality of inputs over a plurality of said observation intervals prior to coherent analysis.

14-15. (Cancelled)

16. (Original) A system for locating a marker associated with a patient comprising:

an excitation source for emitting an exciting waveform at a first frequency, said exciting waveform causing said marker to resonate at a second frequency;

a sensing array including a plurality of sensing coils, said sensing coils outputting a plurality of inputs indicative of a magnetic flux from said resonating marker; and

a receiver for analyzing said plurality of inputs in a coherent manner.